APPENDIX A
ACCURACY OF VISUAL SIMULATIONS

The aesthetics analysis of impacts depends on visual simulations to accurately depict conditions after installation of the project. This brief document describes the process used to generate and maintain accuracy in visual simulations.

A. Site Photography

Photo locations are selected to represent typical near and distant views, especially from public lands when available.

B. CAD Modeling

Three-dimensional computer aided design (CAD) models of the towers and all existing and proposed equipment are incorporated into the CAD models. Sun position at the time of the original photograph are matched and shadows, which reveal considerable detail, are incorporated.

C. Perspective Matching

CAD models can be viewed from any perspective; above, below, near and distant perspectives. GPS is used to record the coordinates of the original photo locations. The location of the model is geo-referenced to real-world spatial coordinates, thus the selected view of the model can be matched to the original perspective in the photograph. Photos of the model are taken within the CAD environment and the digitally overlaid onto the existing photograph. Existing equipment in the photograph and the model are matched to insure the perspective is accurate and alignments are correct.

C. Simulation Production and Rendering

Colors and textures are added to the CAD models depending to the materials specified.